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| Notice of Allowability | Application No. | Applicant(s) |
| | 09/589,426 | MASUDA ET AL. |
| | Examiner Scott Beliveau | Art Unit 2614 |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. This communication is responsive to 08 July 2004.
2. The allowed claim(s) is/are 2 and 4-8. (RENUMBERED AS 2,3,1,4,5 AND 6, RESPECTIVELY)
3. The drawings filed on 29 September 2003 are accepted by the Examiner.
4. Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) All
 - b) Some*
 - c) None
 of the:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
6. CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) hereto or 2) to Paper No./Mail Date _____.
 - (b) including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. Notice of References Cited (PTO-892)
2. Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. Information Disclosure Statements (PTO-1449 or PTO/SB/08),
Paper No./Mail Date _____.
4. Examiner's Comment Regarding Requirement for Deposit
of Biological Material
5. Notice of Informal Patent Application (PTO-152)
6. Interview Summary (PTO-413),
Paper No./Mail Date _____.
7. Examiner's Amendment/Comment
8. Examiner's Statement of Reasons for Allowance
9. Other _____.

DETAILED ACTION

Response to Arguments

1. Applicant's arguments with respect to claims 2 and 4 have been fully considered and are persuasive. The rejection of claims 2 and 4 has been withdrawn.

Allowable Subject Matter

2. Claims 2 and 4-8 are allowed.
3. The following is a statement of reasons for the indication of allowable subject matter:

The use of a "detector" in conjunction with a "gate switch circuit" is known in the art as evidenced, for example, by the Sanders et al. reference. Similarly, the use of "synchronous detection circuits" including filters, delay circuits, is also known in the art as illustrated by the Kobayashi et al. reference. However, it is the examiner's opinion that the art of record, however, is not necessarily conducive to an obvious design choice modifications to incorporate the aforementioned methods into a single embodiment as the applicant has disclosed that the particular configuration wherein the "synchronous detection control" may be "configured as a differential detecting circuit which includes a delay circuit for delaying the upstream signal and a synchronous detector for multiplying the upstream signal with the signal delayed by the delay circuit" serves a particular purpose (Page 11, Lines 5-12).

Furthermore, each of the cited systems for blocking ingress noise using a "detector" and a "gate switch circuit" utilizes a means other than a "synchronous detector" which comprises the elements recited in claims 2 and 4-8. Subsequently, it would not have been necessarily obvious to one of ordinary skill in the art to modify the cited teachings, as they are operable

utilizing a different type/form of detector, and there is no teaching provided in the art of record so as to suggest that the disclosed detectors may be readily substituted/combined using other detection means.

Accordingly, in consideration of claims 5 and 6, the art of record does not suggest nor discloses that the broadly construed “synchronous detection circuit” of the Sanders et al. reference further comprises a “differential detection circuit”. Furthermore, in consideration of claims 2, 4, 7, and 8, there is no suggestion or disclosure to suggest that the composition of the “synchronous detection controller” further comprises a “delay circuit”, a “synchronous detection circuit”, a “low-pass filter”, or a “synchronous detection judging unit”.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled “Comments on Statement of Reasons for Allowance.”

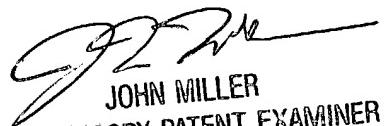
Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Scott Beliveau whose telephone number is 703-305-4907. The examiner can normally be reached on Monday-Friday from 8:30 a.m. - 6:00 p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner’s supervisor, John W. Miller can be reached on 703-305-4795. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

SEB
October 28, 2004



JOHN MILLER
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600